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(54) PORTABLE TERMINAL DEVICE AND FUNCTION CONTROL METHOD FOR PORTABLE TERMINAL DEVICE

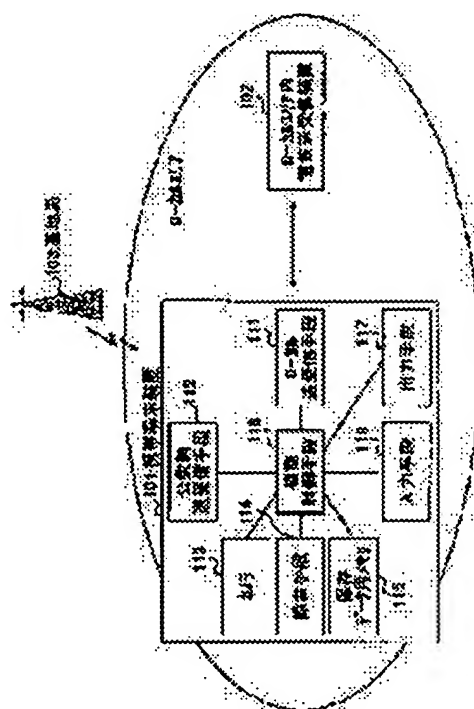
(57)Abstract:

PROBLEM TO BE SOLVED: To provide a function control method wherein the use convenience of a user can be improved not only by controlling a function one-sidedly from the side of a station but also by controlling the function from the viewpoint of the user and functions other than a telephone function can be controlled.

SOLUTION: Ry an inside-a-local-area radio-wave transmitting-receiving apparatus 102, function regulation information which is used to limit the execution of the function of a camera 113, a recording means 114 and the like at a portable terminal device 101 is generated so as to correspond to a regulation decided for a prescribed area, and the generated function regulation information is transmitted. In the device 101, the function regulation

information from the device 102 is received by a local transmitting-receiving means 111.

When a function control means 118 determines that the received information indicates the use prohibition of the function, it controls an output from an output means 117 by any from among a display, a sounding sound and a vibration in such a way that the use prohibition can be recognized by the user.



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CLAIMS

[Claim(s)]

[Claim 1] The personal digital assistant equipment which carries out [providing the functional control means which makes the function of said functional means an arbitration time-amount activation improper condition when it is detected that the received electric wave of said receiving means is overlapped on the functional regulation information which regulates activation of various kinds of functional means, a receiving means receive an electric wave, and said functional means, and] as the description.

[Claim 2] A functional control means is personal digital assistant equipment according to claim 1 characterized by making into a use improper condition only the function for regulation shown using functional regulation information.

[Claim 3] A functional control means is personal digital assistant equipment according to claim 1 or 2 characterized by detecting functional regulation information at the time of the functional initiation directions input of a functional means.

[Claim 4] The personal digital assistant equipment characterized by to provide the functional control means which performs control outputted so that a user may recognize said disable when being superimposed on the functional regulation information which shows the disable of the function of said functional means in the received electric wave in various kinds of functional means, a receiving means receive an electric wave, and this means is detected.

[Claim 5] The personal digital assistant equipment carry out providing the functional control means which performs the control which outputs so that a user may recognize refraining from said use, when being superimposed on the functional regulation information which shows that there is use of the function of said functional means in the received electric wave in various kinds of functional means, a receiving means receive an electric wave, and this means is detected as the description.

[Claim 6] A functional control means is personal digital assistant equipment according to claim 4 or 5 characterized by outputting the disable shown using functional regulation information, the disable of only the function for [of use] reservation, or reservation of use so that a user can recognize.

[Claim 7] claim 6 from claim 4 characterized by a functional control means repealing said initiation directions when functional regulation information is detected and said functional regulation information is detected at the time of the functional initiation directions input of a functional means -- personal digital assistant equipment given in either.

[Claim 8] The personal digital assistant equipment carry out providing the transceiver means receive the functional regulation information which the signal for checking a limit of the function of said functional means transmits at the time of the functional initiation directions input of various kinds of functional means and this means, and is answered according to this transmission at it, and a functional [of carrying out the function of said initiation referent as an arbitration time-amount use improper condition when said functional regulation information was received by this means] control means as the description.

[Claim 9] A functional control means is personal digital assistant equipment according to claim 8 characterized by performing control outputted so that a user can recognize said disable when the

received functional regulation information shows the disable of the function of a functional means.
[Claim 10] A functional control means is personal digital assistant equipment according to claim 8 characterized by performing control outputted so that a user can recognize refraining from said use, when it is shown that the received functional regulation information refrains from use of the function of a functional means.

[Claim 11] claim 10 from claim 1 characterized by the function of a functional means being an image pick-up function or a sound recording function -- personal digital assistant equipment given in either.

[Claim 12] claim 7 from claim 1 -- the sending set characterized by generating so that it may correspond to the regulation to which the functional regulation information received by either with the personal digital assistant equipment of a publication was set in predetermined area, superimposing this generated functional regulation information on an electric wave, and transmitting.

[Claim 13] claim 10 from claim 8 -- the transmitter-receiver characterized by to generate the functional regulation information which shows a functional limit of the functional means in personal digital assistant equipment given in either so that it may correspond to the regulation to which it was set in predetermined area, and to transmit this generated functional regulation information at the time of the signal reception from the transceiver means of said personal digital assistant equipment.

[Claim 14] claim 7 from claim 1 -- the mobile communication system characterized by providing in either the personal digital assistant equipment of a publication, a sending set according to claim 12, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[Claim 15] claim 10 from claim 8 -- the mobile communication system characterized by providing in either the personal digital assistant equipment of a publication, a transmitter-receiver according to claim 13, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[Claim 16] Various kinds of functional means and an electronic ticket preservation means by which the electronic ticket information to which entrance in predetermined area is permitted was saved, A transceiver means to receive the right-or-wrong information on said electronic ticket information and notice information which said electronic ticket information is transmitted at the time of an electronic ticket transmitting initiation directions input, and are answered according to this transmission, Personal digital assistant equipment characterized by providing the functional control means which performs control outputted so that a user can recognize the contents of said received notice information.

[Claim 17] A terminal control means is personal digital assistant equipment according to claim 16 characterized by performing control outputted so that a user can recognize the regulation matter of the function of said functional means when notice information is the functional regulation information which shows regulation of the function of a functional means.

[Claim 18] A functional control means is personal digital assistant equipment according to claim 17 characterized by performing control which makes the function of said disable a use improper condition when functional regulation information shows the disable of the function of a functional means.

[Claim 19] Functional regulation information is personal digital assistant equipment according to claim 17 or 18 characterized by including the level information which controls the function of a functional means according to the regulation level of area.

[Claim 20] A terminal control means is personal digital assistant equipment according to claim 16 characterized by performing control outputted so that a user can recognize the map using said map information when notice information is the map information on predetermined area.

[Claim 21] A terminal control means is personal digital assistant equipment according to claim 16 characterized by performing control outputted so that a user can recognize the contents of said electronic ticket information when notice information is the electronic ticket information on service available in predetermined area.

[Claim 22] claim 21 from claim 16 to which a notice information preservation means to save notice information is provided, and a terminal control means is characterized by performing control based on said saved notice information -- personal digital assistant equipment given in either.

[Claim 23] claim 22 from claim 16 -- the electronic ticket reader characterized by to provide a transceiver means transmit said saved notice information with the right-or-wrong information which receives a check means check the right or wrong of the electronic ticket information transmitted from the personal digital assistant equipment of a publication to either, a preservation means to by which notice information was saved, and said electronic ticket information, and shows these contents of a check at the time of the justification check of said electronic ticket information with said check means.

[Claim 24] claim 22 from claim 16 -- the entrance system characterized by providing the personal digital assistant equipment and the electronic ticket reader according to claim 23 of a publication in either.

[Claim 25] claim 22 from claim 16 -- the mobile communication system characterized by providing in either the personal digital assistant equipment of a publication, an electronic ticket reader according to claim 23, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[Claim 26] The functional control approach of personal digital assistant equipment of carrying out carrying out said function as an arbitration time-amount use improper condition when it generates so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in a sending set in predetermined area, and this generated functional regulation information transmits and said functional regulation information is received in said personal digital assistant equipment as the description.

[Claim 27] The functional control approach of personal digital assistant equipment of carrying out outputting so that a user can recognize said disable when generate so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in a sending set in predetermined area, and this generated functional regulation information transmits, said functional regulation information receives in said personal digital assistant equipment and this receipt information shows the disable of said function as the description.

[Claim 28] Generate so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in the sending set in predetermined area, and transmit this generated functional regulation information, and it sets to said personal digital assistant equipment. The functional control approach of the personal digital assistant equipment characterized by outputting so that a user can recognize refraining from said use, when it is shown that receive said functional regulation information and this receipt information refrains from use of said function.

[Claim 29] In personal digital assistant equipment, transmit the signal for checking a limit of said function at the time of the functional initiation directions input of this equipment, and it sets to a transmitter-receiver. Transmit the functional regulation information generated so that it might correspond to the regulation set to predetermined area at the time of reception of said transmitted signal, and it sets to said personal digital assistant equipment. The functional control approach of the personal digital assistant equipment characterized by making the function of said initiation referent into an arbitration time amount use improper condition at the time of reception of said functional regulation information.

[Claim 30] Personal digital assistant equipment is the functional control approach of the personal digital assistant equipment according to claim 29 characterized by outputting so that a user can recognize said disable when the received functional regulation information shows the disable of a function.

[Claim 31] Personal digital assistant equipment is the functional control approach of the personal digital assistant equipment according to claim 29 characterized by outputting so that a user can recognize refraining from said use, when it is shown that the received functional regulation information refrains from use of a function.

[Claim 32] The management method in the entrance system characterized by to output so that the electronic ticket information to which entrance in predetermined area is permitted is transmitted in personal digital assistant equipment, an electronic ticket reader receives this transmit information, notice information may be transmitted with forward information when it is checked that this received electronic

ticket information is forward, said personal digital assistant equipment may receive these transmit information and a user may recognize the contents of this receipt information.

[Claim 33] Personal digital assistant equipment is a management method in the entrance system according to claim 32 characterized by performing control which makes the function of said disable a use improper condition when notice information shows the disable of the function of personal digital assistant equipment.

[Claim 34] The notice information on personal digital assistant equipment is a management method in the claim 32 publication characterized by supposing that it is effective after being obtained at the time of entrance until it performs leaving processing between electronic ticket readers at the time of leaving, and an entrance system according to claim 33.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the functional control approach of personal digital assistant equipments, such as a portable telephone in mobile communication system, and an information terminal unit equipped with a cellular-phone function and computer ability, and personal digital assistant equipment.

[0002]

[Description of the Prior Art] If the portable telephone the rapid increment in need of which is enhanced is used in recent years, telephoning is possible wherever it may be in. However, on the other hand, the situation that neither the effect of a transmitted electric wave nor the melody sound which tells arrival of the mail is liked by other men is also produced.

[0003] Then, in order to restrict such a function, in JP, 10-145849, A, the radio equipment which restricts a function is offered in specific area by having the functional control signal transmitter which answers a call signal from a base station and transmits a functional control signal, and the walkie-talkie which receives the functional control signal which are the call signal and the same frequency, without needing no actuation of a user.

[0004]

[Problem(s) to be Solved by the Invention] However, in conventional equipment, with the radio equipment of the above-mentioned official report, on the other hand, the function is restricted to the target from a base station, and there is a problem that a user is user-unfriendly.

[0005] In recent years, in a portable telephone, functions, such as a camera, are being carried besides the function as a mere telephone, and it is thought that it will multi-functionalize increasingly from now on. It is necessary to take into consideration also about a limit of not only a telephone function but other functions from this. For example, they are a limit of the photography function at the time of carrying in of the portable telephone with a camera into the concert hall, a limit of the flash plate function at the time of photography with the camera in an art gallery, etc.

[0006] This invention is made in view of this point, and a user's user-friendliness can be improved by performing functional control from not only the one-sided functional limit from an office side but a user's view, and it aims at offering the functional control approach of the portable telephone which can also control functions other than a telephone function, and personal digital assistant equipment.

[0007]

[Means for Solving the Problem] When it is detected that the personal digital assistant equipment of this invention is superimposed on the functional regulation information which regulates activation of various kinds of functional means, a receiving means receive an electric wave, and said functional means by the received electric wave of said receiving means, the configuration possessing the functional control means which makes the function of said functional means an arbitration time-amount activation improper condition takes.

[0008] According to this configuration, functions other than a telephone function are also controllable

by the electric wave from the outside.

[0009] The personal digital assistant equipment of this invention takes the configuration which makes only the function for regulation by which a functional control means is shown using functional regulation information a use improper condition in the above-mentioned configuration.

[0010] According to this configuration, the function of arbitration other than a telephone function is controllable by the electric wave from the outside.

[0011] The personal digital assistant equipment of this invention takes the configuration in which a functional control means detects functional regulation information at the time of the functional initiation directions input of a functional means in the above-mentioned configuration.

[0012] According to this configuration, the function whose users other than a telephone function performed activation directions is controllable by the electric wave from the outside.

[0013] The personal digital assistant equipment of this invention takes the configuration possessing the functional control means which performs control outputted so that a user may recognize said disable, when being superimposed on the functional regulation information which shows the disable of the function of said functional means in the received electric wave in various kinds of functional means, a receiving means receive an electric wave, and this means is detected. *super*

[0014] According to this configuration, since not only the one-sided functional limit by the electric wave from the outside but a user can judge the use right or wrong of a function, a user's user-friendliness can be improved.

[0015] When it is detected that the personal digital assistant equipment of this invention is superimposed on the functional regulation information which shows that there is use of the function of said functional means in the received electric wave in various kinds of functional means, a receiving means receive an electric wave, and this means, the configuration which provides in the functional control means which performs the control which outputs so that a user may recognize refraining from said use takes.

[0016] According to this configuration, since not only the one-sided functional limit by the electric wave from the outside but a user can judge the use right or wrong of a function, a user's user-friendliness can be improved.

[0017] The personal digital assistant equipment of this invention takes the configuration which outputs so that a user can recognize the disable a functional control means is indicated to be using functional regulation information, the disable of only the function for [of use] reservation, or reservation of use in the above-mentioned configuration.

[0018] According to this configuration, since a user can judge the use right or wrong of the function of arbitration, a user's user-friendliness can be improved.

[0019] In the above-mentioned configuration, in a functional control means, the personal digital assistant equipment of this invention takes the configuration which repeals said initiation directions, when functional regulation information is detected and said functional regulation information is detected at the time of the functional initiation directions input of a functional means.

[0020] Since according to this configuration the use right or wrong of that function can be judged when a user does the actuation input of the activation initiation directions of an arbitration function, a user's user-friendliness can be improved.

→ [0021] The personal digital assistant equipment of this invention transmits the signal for checking a limit of the function of said functional means at the time of the functional initiation directions input of various kinds of functional means and this means, and takes the configuration provide the transceiver means receive the functional regulation information answered according to this transmission, and a functional [of carrying out the function of said initiation referent as an arbitration time-amount use improper condition when said functional regulation information is received by this means] control means.

[0022] According to this configuration, when a user does the actuation input of the activation initiation directions of an arbitration function, activation of that function can be controlled. Moreover, even when the actuation input of the activation initiation directions of the function in which the user is a candidate for a limit is carried out, it can control from an external device so that the function is not performed.

[0023] In the above-mentioned configuration, the personal digital assistant equipment of this invention

takes the configuration which performs control which outputs so that a user can recognize said disable, when the functional regulation information that the functional control means was received shows the disable of the function of a functional means.

[0024] Since according to this configuration the use right or wrong of that function can be judged when a user does the actuation input of the activation initiation directions of an arbitration function, a user's user-friendliness can be improved.

[0025] In the above-mentioned configuration, the personal digital assistant equipment of this invention takes the configuration which performs control which outputs so that a user can recognize refraining from said use, when it is shown that the functional regulation information that the functional control means was received refrains from use of the function of a functional means.

[0026] Since according to this configuration the use right or wrong of that function can be judged when a user does the actuation input of the activation initiation directions of an arbitration function, a user's user-friendliness can be improved.

[0027] The personal digital assistant equipment of this invention takes the configuration whose function of a functional means is an image pick-up function or a sound recording function in the above-mentioned configuration.

[0028] According to this configuration, it is controllable like the above of an image pick-up function or a sound recording function.

[0029] The sending set of this invention is generated so that it may correspond to the regulation to which the functional regulation information received with the personal digital assistant equipment of one of the above and this configuration was set in predetermined area, and it takes the configuration which superimposes this generated functional regulation information on an electric wave, and is transmitted.

[0030] According to this configuration, the regulation matter in area, such as a hospital, a library, and the concert hall, can be easily transmitted to personal digital assistant equipment.

→ [0031] The transmitter-receiver of this invention generates the functional regulation information which shows a functional limit of the functional means in the personal digital assistant equipment of one of the above, and this configuration so that it may correspond to the regulation to which it was set in predetermined area, and the configuration which transmits this generated functional regulation information at the time of the signal reception from the transceiver means of said personal digital assistant equipment takes.

[0032] According to this configuration, the regulation matter in area, such as a hospital, a library, and the concert hall, can be transmitted to personal digital assistant equipment according to the demand from personal digital assistant equipment.

[0033] The mobile communication system of this invention takes the configuration possessing one of the above, the personal digital assistant equipment of this configuration, the sending set of the above-mentioned configuration, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[0034] According to this configuration, in mobile communication system, the same operation effectiveness as the personal digital assistant equipment of one of the above and this configuration and the sending set of the above-mentioned configuration can be acquired.

[0035] The mobile communication system of this invention takes the configuration possessing one of the above, the personal digital assistant equipment of this configuration, the sending set of the above-mentioned configuration, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[0036] According to this configuration, in mobile communication system, the same operation effectiveness as the personal digital assistant equipment of one of the above and this configuration and the transmitter-receiver of the above-mentioned configuration can be acquired.

[0037] An electronic ticket preservation means by which the electronic ticket information which the personal digital assistant equipment of this invention permits entrance in various kinds of functional means and predetermined area was saved, A transceiver means to receive the right-or-wrong information on said electronic ticket information and notice information which said electronic ticket information is

transmitted at the time of an electronic ticket transmitting initiation directions input, and are answered according to this transmission, The configuration possessing the functional control means which performs control outputted so that a user can recognize the contents of said received notice information is taken.

[0038] According to this configuration, it combines with the check processing at the time of entrance, various notice information is transmitted to personal digital assistant equipment, and a user can recognize that notice information.

[0039] The personal digital assistant equipment of this invention takes the configuration to which a terminal control means carries out control to which it outputs so that a user can recognize the regulation matter of the function of said functional means when notice information is the functional regulation information which shows regulation of the function of a functional means in the above-mentioned configuration.

[0040] According to this configuration, it can combine with the check processing at the time of entrance, the functional regulation matter of the personal digital assistant equipment in the hall can be transmitted, and a user can recognize that regulation matter.

[0041] In the above-mentioned configuration, the personal digital assistant equipment of this invention takes the configuration which performs control which makes the function of said disable a use improper condition, when, as for a functional control means, functional regulation information shows the disable of the function of a functional means.

[0042] According to this configuration, it can combine with the check processing at the time of entrance, the functional disable matter of the personal digital assistant equipment in the hall can be transmitted, and the function of that disable can be automatically made into a use improper condition.

[0043] The personal digital assistant equipment of this invention takes a configuration including the level information by which functional regulation information controls the function of a functional means according to the regulation level of area in the above-mentioned configuration.

[0044] According to this configuration, the function of the personal digital assistant equipment according to the level of regulation in the hall is controllable. Automatic or a user is able to perform this regulation to arbitration.

[0045] The personal digital assistant equipment of this invention takes the configuration to which a terminal control means carries out control to which it outputs so that a user can recognize the map using said map information when notice information is the map information on predetermined area in the above-mentioned configuration.

[0046] According to this configuration, a user can see the map in the hall with personal digital assistant equipment.

[0047] The personal digital assistant equipment of this invention takes the configuration to which a terminal control means carries out control to which it outputs so that a user can recognize the contents of said electronic ticket information when notice information is the electronic ticket information on service available in predetermined area in the above-mentioned configuration.

[0048] According to this configuration, when entrance is permitted, use of the attraction in the hall etc. can be automatically limited at the time of entrance authorization.

[0049] The personal digital assistant equipment of this invention possesses a notice information preservation means to save notice information, in the above-mentioned configuration, and a terminal control means takes the configuration which performs control based on said saved notice information.

[0050] According to this configuration, since notice information is saved to personal digital assistant equipment, a user can use it for arbitration afterwards.

[0051] The electronic ticket reader of this invention takes the configuration possessing a transceiver means transmit said saved notice information with the right-or-wrong information which receives one of the above, a check means check the right or wrong of the electronic ticket information transmitted from the personal digital assistant equipment of this configuration, a preservation means to by_which notice information was saved, and said electronic ticket information, and shows these contents of a check at the time of the justification check of said electronic ticket information with said check means.

[0052] According to this configuration, by receiving electronic ticket information from personal digital assistant equipment, automatically, authorization of entrance and regulation of the function of personal digital assistant equipment are performed, and offer of the service information to the user of personal digital assistant equipment etc. can be performed.

[0053] The entrance system of this invention takes the configuration possessing one of the above, the personal digital assistant equipment of this configuration, and the electronic ticket reader of the above-mentioned configuration.

[0054] According to this configuration, in the entrance system in the hall, the same operation effectiveness as one of the above can be acquired.

[0055] The mobile communication system of this invention takes the configuration possessing one of the above, the personal digital assistant equipment of this configuration, the electronic ticket reader of the above-mentioned configuration, and said personal digital assistant equipment and the base station equipment which performs indirect communication to a communication network.

[0056] According to this configuration, in mobile communication system, the same operation effectiveness as one of the above can be acquired.

[0057] When said functional regulation information is received, it was made it having generated so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in predetermined area, this generated functional regulation information having transmitted, and the functional control approach of the personal digital assistant equipment of this invention having carried out said function as an arbitration time-amount use improper condition in said personal digital assistant equipment in a sending set.

[0058] According to this approach, functions other than a telephone function are also controllable by the electric wave from an external sending set.

[0059] The functional control approach of the personal digital assistant equipment of this invention is generated so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in the sending set in predetermined area. When this generated functional regulation information was transmitted, said functional regulation information was received in said personal digital assistant equipment and this receipt information showed the disable of said function, it was made to output so that a user can recognize said disable.

[0060] According to this approach, since not only the one-sided functional limit by the electric wave from an external sending set but a user can judge the use right or wrong of a function, a user's user-friendliness can be improved.

[0061] The functional control approach of the personal digital assistant equipment of this invention is generated so that it may correspond to the regulation to which the functional regulation information for restricting activation of the function of personal digital assistant equipment was set in the sending set in predetermined area. This generated functional regulation information was transmitted and said functional regulation information was received in said personal digital assistant equipment, and when it was shown that this receipt information refrains from use of said function, it was made to output so that a user can recognize refraining from said use.

[0062] According to this approach, since not only the one-sided functional limit by the electric wave from an external sending set but a user can judge the use right or wrong of a function, a user's user-friendliness can be improved.

[0063] The functional control approach of the personal digital assistant equipment of this invention transmits the signal for checking a limit of said function at the time of the functional initiation directions input of this equipment in personal digital assistant equipment, and sets it to a transmitter-receiver. The functional regulation information generated so that it might correspond to the regulation set to predetermined area at the time of reception of said transmitted signal is transmitted, and it was made to make the function of said initiation referent into the arbitration time amount use improper condition in said personal digital assistant equipment at the time of reception of said functional regulation

information.

[0064] According to this approach, when a user does the actuation input of the activation initiation directions of an arbitration function, activation of that function can be controlled. Moreover, even when the actuation input of the activation initiation directions of the function in which the user is a candidate for a limit is carried out, it can control from an external device so that the function is not performed.

[0065] When the received functional regulation information showed the disable of a function, it was made for the functional control approach of the personal digital assistant equipment of this invention to output personal digital assistant equipment in the above-mentioned approach, so that a user can recognize said disable.

[0066] Since according to this approach the use right or wrong of that function can be judged when a user does the actuation input of the activation initiation directions of an arbitration function, a user's user-friendliness can be improved.

[0067] When it was shown that the received functional regulation information refrains from use of a function, it was made for the functional control approach of the personal digital assistant equipment of this invention to output personal digital assistant equipment in the above-mentioned approach, so that a user can recognize refraining from said use.

[0068] Since according to this approach the use right or wrong of that function can be judged when a user does the actuation input of the activation initiation directions of an arbitration function, a user's user-friendliness can be improved.

[0069] In personal digital assistant equipment, the electronic ticket information to which entrance in predetermined area is permitted is transmitted, the management method in the entrance system of this invention receives this transmit information with an electronic ticket reader, when it is checked as this received electronic ticket information is forward, it transmits notice information with forward information, and it receives these transmit information with said personal digital assistant equipment, and it made output it so that a user may recognize the contents of this receipt information.

[0070] According to this approach, it combines with the check processing at the time of entrance, various notice information is transmitted to personal digital assistant equipment, and a user can recognize that notice information.

[0071] In the above-mentioned approach, the management method in the entrance system of this invention was made to perform control which makes the function of said disable a use improper condition, when, as for personal digital assistant equipment, notice information showed the disable of the function of personal digital assistant equipment.

[0072] According to this approach, it can combine with the check processing at the time of entrance, the functional disable matter of the personal digital assistant equipment in the hall can be transmitted, and the function of that disable can be automatically made into a use improper condition.

[0073] In the above-mentioned approach, the management method in the entrance system of this invention was made to presuppose that it is effective after the notice information on personal digital assistant equipment is acquired at the time of entrance until it performed leaving processing between electronic ticket readers at the time of leaving.

[0074] According to this approach, only while the notice information on personal digital assistant equipment is in the hall, suppose that it is effective.

[0075]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing.

[0076] (Gestalt 1 of operation) Drawing 1 is the block diagram showing the configuration of the mobile communication system with which the personal digital assistant equipment concerning the gestalt 1 of operation of this invention was applied.

[0077] The mobile communication system shown in this drawing 1 is equipped with the base station 103 by which cable connection was made, and is constituted at the public network which is not illustrated with the personal digital assistant equipments 101, such as a portable telephone, and the electric-wave transmitter-receiver 102 in a local-area.

[0078] A local transceiver means 111 by which personal digital assistant equipment 101 performs a local communication link by the electric-wave transmitter-receiver 102 in a local-area, and short distance, A public network transceiver means 112 to perform transmission and reception with a public network by communicating with a base station 103, The camera 113 which performs photography of a dynamic image or a static image, and a sound recording means 114 to perform sound recording, The memory 115 for preservation data holding the functional information which personal digital assistant equipment 101 has, or functional limit information, It has the input means 116, such as an input key, the output means 117, such as display means, such as a display, a loudspeaker, and vibrator, and the functional control means 118 that performs processing for checking whether the functional limit is performed, and is constituted. 112

[0079] However, you may be transmission and reception of the information the electric wave for short distances may be used for the approach of transmission and reception, and according to infrared radiation with the local transceiver means 111 and the electric-wave transmitter-receiver 102 in a local-area. infrared

[0080] It explains with reference to the flow Fig. showing actuation of the functional control in the case of restricting a photography function with a camera among the functions with which the personal digital assistant equipment 101 of such a configuration is equipped in drawing 2.

↓ [0081] In a step ST 201, the user of personal digital assistant equipment 101 presupposes directions of photography initiation with a camera 113 that the actuation input was carried out from the input means 116.

[0082] If the input is performed, in a step ST 202, the functional control means 118 will check whether the limit of a photography function is performed. This judges a limit by whether functional regulation information is received by the local transceiver means 111 in a step ST 203. In the electric-wave transmitter-receiver 102 in a local-area, functional regulation information is generated according to the regulation set to predetermined area, and is superimposed and transmitted to an electric wave.

[0083] When functional regulation information is not received, it judges that the limit of a photography function is not performed and photography is started in a step ST 204.

[0084] When functional regulation information is received, in a step ST 205, the reception functional regulation information judges whether it is the regulation information about photography.

[0085] Consequently, if it is the regulation information about photography, in a step ST 206, the functional control means 118 will tell a user about photography being forbidden by displaying the message of a purport by which photography in this area is forbidden to the output means 117, or controlling vibration and singing. forbidden

[0086] Moreover, a user is told about the functional control means 118 refraining from photography by displaying the message of the purport which has photography in this area in the output means 117, or controlling vibration and singing.

[0087] In case a user is notified of this prohibition or cutting down, the functional control means 118 may be made to make the function regulated for functional regulation information an arbitration time amount use improper condition.

[0088] Moreover, before the directions input of photography initiation is performed from the input means 116, as long as the functional regulation information which shows the regulation about photography is received, it may be made to process a step ST 206.

[0089] Moreover, in the above-mentioned explanation, when the functional control means 118 checked a limit of a photography function at a step ST 202 according to the directions input of photography initiation, it had accomplished so that a limit might be judged by whether functional regulation information is received by the local transceiver means 111 in a step ST 203.

[0090] This processing may be performed as follows. First, it controls to transmit a signal for the functional control means 118 to check a limit of a photography function at the time of the directions input of photography initiation to the electric-wave transmitter-receiver 102 in a local-area from the local transceiver means 111.

[0091] Functional regulation information is transmitted from the electric-wave transmitter-receiver 102

in a local-area which received the sending signal by this control, and a limit is judged by whether the local transceiver means 111 has received this functional regulation information.

[0092] As mentioned above, although explained taking the case of the photography function, it is similarly controlled about singing functions, such as a sound recording function and a dispatch function of an electric wave, and a ringer tone, and is further controlled similarly about a limit of the flash plate function of a camera.

[0093] Thus, according to the personal digital assistant equipment 101 of the gestalt of operation, the transmission and reception of functional regulation information not only according to the one-sided functional limit from a station side but regulation in the area where personal digital assistant equipment 101 exists restricted the various functions of personal digital assistant equipment 101. A user's user-friendliness can be improved and functions other than a telephone function can also be controlled by this. In other words, it becomes possible to restrict only a specific function among various functions which personal digital assistant equipment 101 has.

[0094] (Gestalt 2 of operation) Drawing 3 is the block diagram showing the entrance structure of a system to which the personal digital assistant equipment concerning the gestalt 2 of operation of this invention was applied.

[0095] The entrance system shown in this drawing 3 is equipped with personal digital assistant equipment 301 and the electronic ticket readers 302, such as a portable telephone, and is constituted.

[0096] An electronic ticket preservation means 311 by which personal digital assistant equipment 301 saves electronic ticket information, A notice information preservation means 312 to save information, such as functional limit information and map information, A functional information preservation means 313 to save the information about the function of personal digital assistant equipment 301, A transceiver means 314 to transmit and receive information between the electronic ticket readers 302, The terminal control means 315 which controls personal digital assistant equipment 301 based on the notice information from the electronic ticket reader 302 received with the transceiver means 314, It has the input means 316, such as an input key, and the output means 317, such as display means, such as a display, a loudspeaker, and vibrator, and is constituted.

[0097] The electronic ticket reader 302 is equipped with an electronic ticket check means 321 to check the justification of the electronic ticket sent from personal digital assistant equipment 301, a notice information preservation means 322 by which the notice information transmitted to personal digital assistant equipment 301 when the justification of an electronic ticket is checked was stored, and the transceiver means 323 that transmit and receive information between personal digital assistant equipment 301, and is constituted.

[0098] It explains with reference to the flow Fig. showing actuation of the functional control in the case of restricting a melody signaling an incoming call function among the functions with which the personal digital assistant equipment 101 of such a configuration is equipped, and actuation of the entrance check control with an electronic ticket in drawing 4 .

[0099] However, the user who possesses personal digital assistant equipment 301 explains the case where it comes in using the electronic ticket saved for the electronic ticket preservation means 311.

[0100] First, a user performs the read request of an electronic ticket to the electronic ticket reader 302 by operating the input means 316. By control of the terminal control means 315 according to this demand, the electronic ticket information saved for the electronic ticket preservation means 311 is transmitted to the electronic ticket reader 302 through the transceiver means 314.

[0101] The electronic ticket information is received by the transceiver means 323 in the electronic ticket reader 302. In a step ST 401, the justification of the received electronic ticket information is checked with the electronic ticket check means 321.

[0102] In a step ST 402, when the justification cannot be checked, in a step ST 403, coming in becomes impossible. On the other hand, when justification is checked, the notice information which combined with the information on a purport that entrance is permitted, and was saved for the notice information preservation means 322 in a step ST 404 is transmitted to personal digital assistant equipment 301 from the transceiver means 323.

[0103] However, suppose that notice information is the information that use of a specific function is restricted in the hall although entrance is permitted. Suppose that a specific function is what restricts singing of a melody signaling an incoming call here.

[0104] With the personal digital assistant equipment 301 which received notice information, the contents of notice information are analyzed by the terminal control means 315. Here, since notice information is the information about functional control, it is checked whether the functional item about the functional control shown in notice information is included in the functional item of the personal digital assistant equipment 301 saved for the functional information preservation means 313.

[0105] If personal digital assistant equipment 301 is equipped with the restricted function, in a step ST 405, the comprehension message of a purport which restricts the function will be outputted to the output means 317 here. when you are the display 501 as the output means 317 boils and shows, please turn OFF the melody signaling an incoming call of a telephone. It is displayed, and further, comprehension and the No carbon button are displayed and the operating instruction of this carbon button is displayed.

[0106] In a step ST 406, a user does the input directions of whether the functional limit is understood from the input means 316. When not understanding, in a step ST 403, entrance authorization serves as an invalid.

[0107] When understanding, in a step ST 407, a setup of a melody signaling an incoming call is automatically changed by control of the terminal control means 315. Then, in a step ST 408, entrance authorization information is held at the notice information preservation means 312.

[0108] In addition, although the example of this invention explained taking the case of functional control information as notice information, you may be map information in the hall, and may be a ticket for every attraction used in the hall.

[0109] Moreover, as shown in (a) of drawing 6, and (b), the level information 602 on a functional limit may be given to the functional regulation information 601 which is the notice information which personal digital assistant equipment 301 receives. This grant is applicable similarly with the gestalt 1 of operation.

[0110] As for the example of (a), the level information 602 on compulsion is given to the functional regulation information 601 on a flash plate OFF. As for the example of (b), the level information 602 on manners is given to the functional regulation information 601 on Singing OFF.

[0111] Thus, by giving the level information 602, although it is not [whether functional control compulsory as functional control is demanded and] compulsion, it becomes possible to distinguish whether the limit of use to a user is recommended (manners). By this, room for not a one-sided functional limit but a user to set up arises.

[0112] Furthermore, by preparing a setup of operation in case functional control level is recommendation (manners) in personal digital assistant equipment 301, functional control level becomes possible [that some users change a setup automatically also on recommendation (manners) level], and the troublesomeness of setting modification is lost by this. It also becomes possible to use a function for the user do not restrict. In addition, notice information, such as regulation information notified at the time of predetermined area entrance, may be made to presuppose that it is invalid by carrying out a leaving check at the time of leaving.

[0113] Thus, according to the entrance system of the gestalt 2 of operation, it becomes possible to combine with the check processing at the time of entrance, and to transmit various information to personal digital assistant equipment 301, and it becomes possible to ensure functional control etc. Moreover, it becomes possible to leave the selection room of the functional use not only by one-sided functional regulation but a user's hope.

[0114]

[Effect of the Invention] As explained above, according to this invention, by performing functional control from not only the one-sided functional limit from an office side but a user's view, a user's user-friendliness can be improved and functions other than a telephone function can also be controlled.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention relates to the functional control approach of personal digital assistant equipments, such as a portable telephone in mobile communication system, and an information terminal unit equipped with a cellular-phone function and computer ability, and personal digital assistant equipment.

[Translation done.]

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PRIOR ART

[Description of the Prior Art] If the portable telephone the rapid increment in need of which is enhanced is used in recent years, telephoning is possible wherever it may be in. However, on the other hand, the situation that neither the effect of a transmitted electric wave nor the melody sound which tells arrival of the mail is liked by other men is also produced.

[0003] Then, in order to restrict such a function, in JP,10-145849,A, the radio equipment which restricts a function is offered in specific area by having the functional control signal transmitter which answers a call signal from a base station and transmits a functional control signal, and the walkie-talkie which receives the functional control signal which are the call signal and the same frequency, without needing no actuation of a user.

[0004]

[Translation done.]

JAPANESE

[JP,2002-027554,A]

CLAIMS DETAILED DESCRIPTION TECHNICAL FIELD PRIOR ART EFFECT OF THE
INVENTION TECHNICAL PROBLEM MEANS DESCRIPTION OF DRAWINGS DRAWINGS

[Translation done.]

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, in conventional equipment, with the radio equipment of the above-mentioned official report, on the other hand, the function is restricted to the target from a base station, and there is a problem that a user is user-unfriendly.

[0005] In recent years, in a portable telephone, functions, such as a camera, are being carried besides the function as a mere telephone, and it is thought that it will multi-functionalize increasingly from now on. It is necessary to take into consideration also about a limit of not only a telephone function but other functions from this. For example, they are a limit of the photography function at the time of carrying in of the portable telephone with a camera into the concert hall, a limit of the flash plate function at the time of photography with the camera in an art gallery, etc.

[0006] This invention is made in view of this point, and a user's user-friendliness can be improved by performing functional control from not only the one-sided functional limit from an office side but a user's view, and it aims at offering the functional control approach of the portable telephone which can also control functions other than a telephone function, and personal digital assistant equipment.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the configuration of the mobile communication system with which the personal digital assistant equipment concerning the gestalt 1 of operation of this invention was applied

[Drawing 2] The flow Fig. for explaining actuation of the functional control in the case of restricting a photography function with a camera among the functions with which the personal digital assistant equipment concerning the gestalt 1 of operation is equipped

[Drawing 3] The block diagram showing the entrance structure of a system to which the personal digital assistant equipment concerning the gestalt 2 of operation of this invention was applied

[Drawing 4] The flow Fig. for explaining actuation of the functional control in the case of restricting a melody signaling an incoming call function among the functions with which the personal digital assistant equipment concerning the gestalt 2 of operation is equipped, and actuation of the entrance check control with an electronic ticket

[Drawing 5] The example Fig. of a display of the notice information displayed on the output means (display) of the personal digital assistant equipment concerning the gestalt 2 of operation

[Drawing 6] The example Fig. of a configuration of the functional regulation information received with the personal digital assistant equipment concerning the gestalten 1 and 2 of operation

[Description of Notations]

101,301 Personal digital assistant equipment

102 Electric-Wave Transmitter-receiver in Local-area

103 Base Station

112 Public Network Transceiver Means

113 Camera

114 Sound Recording Means

115 Memory for Preservation Data

116,316 Input means

117,317 Output means

118 Functional Control Means

302 Electronic Ticket Reader

311 Electronic Ticket Preservation Means

312,322 Notice information preservation means

314,323 Transceiver means

315 Terminal Control Means

321 Electronic Ticket Check Means

[Translation done.]

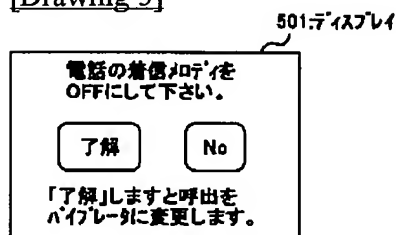
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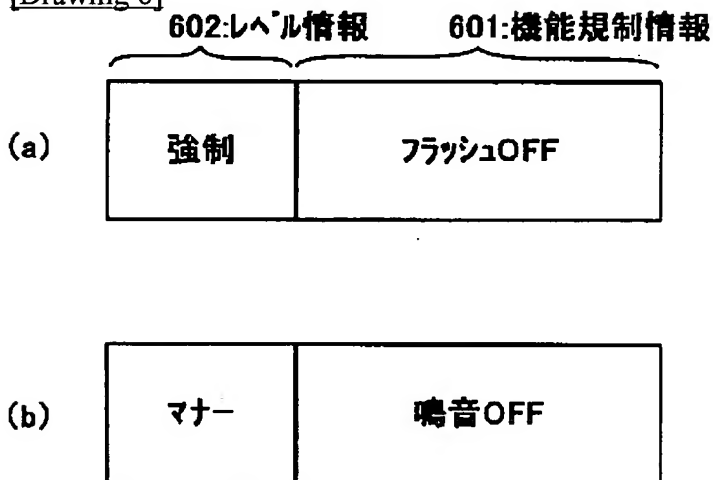
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DRAWINGS

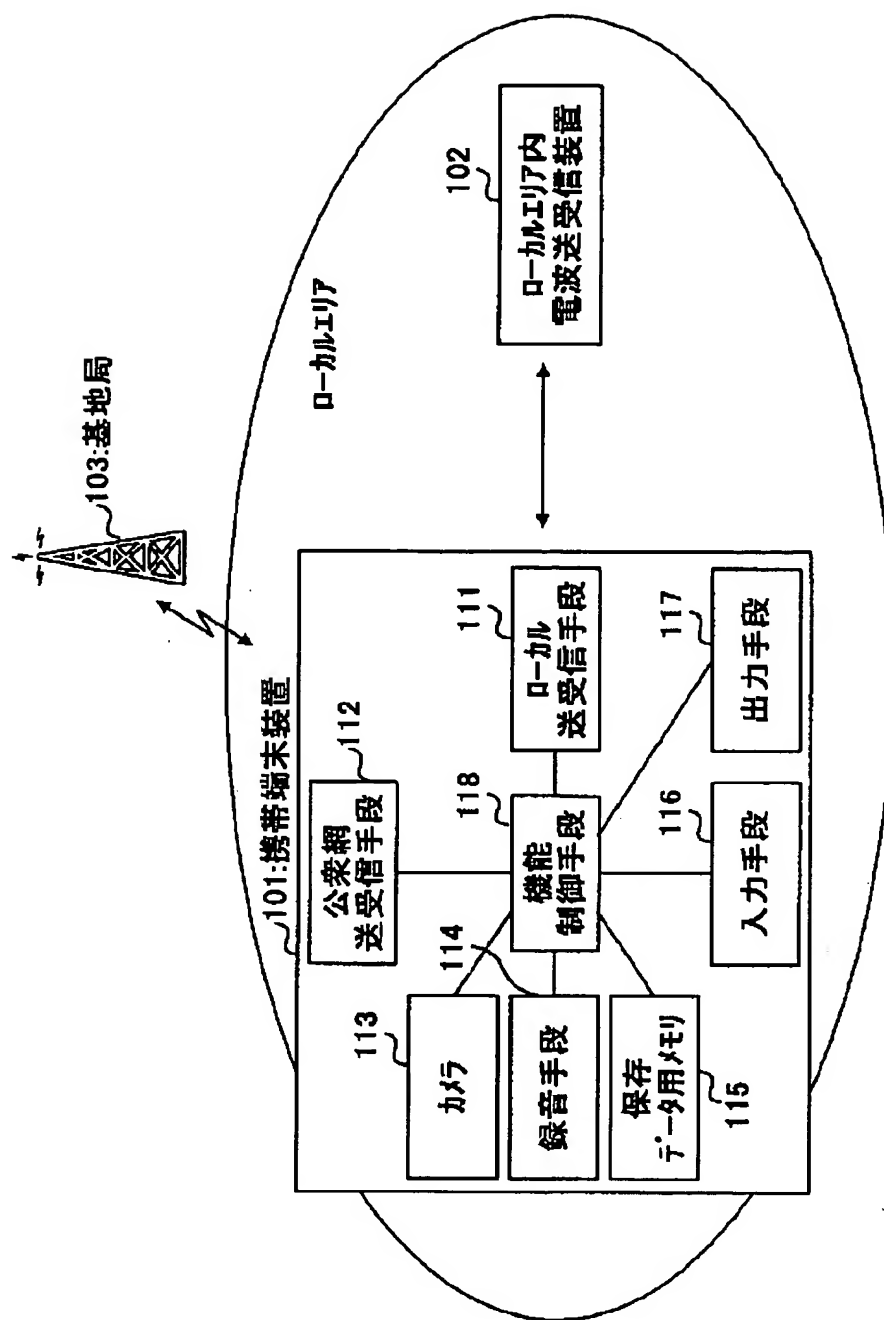
[Drawing 5]



[Drawing 6]



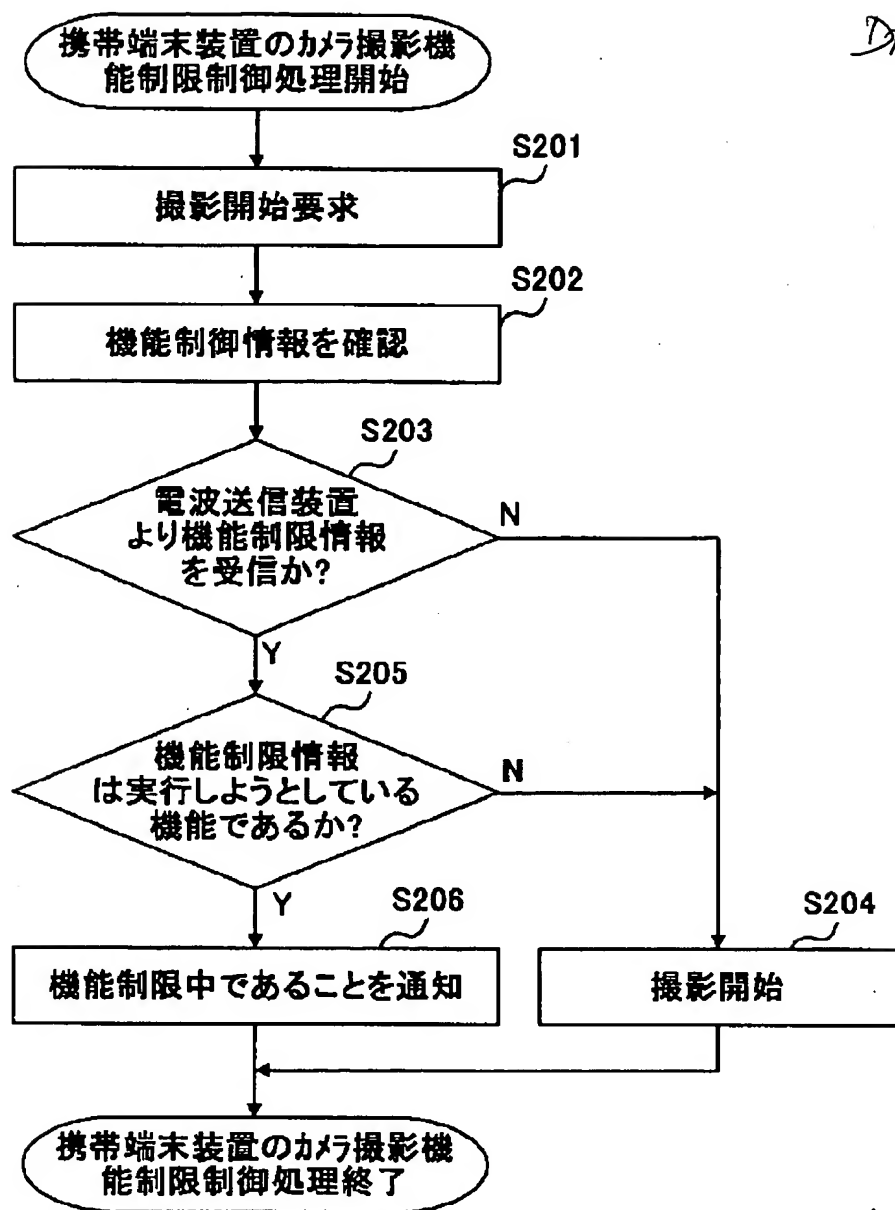
[Drawing 1]



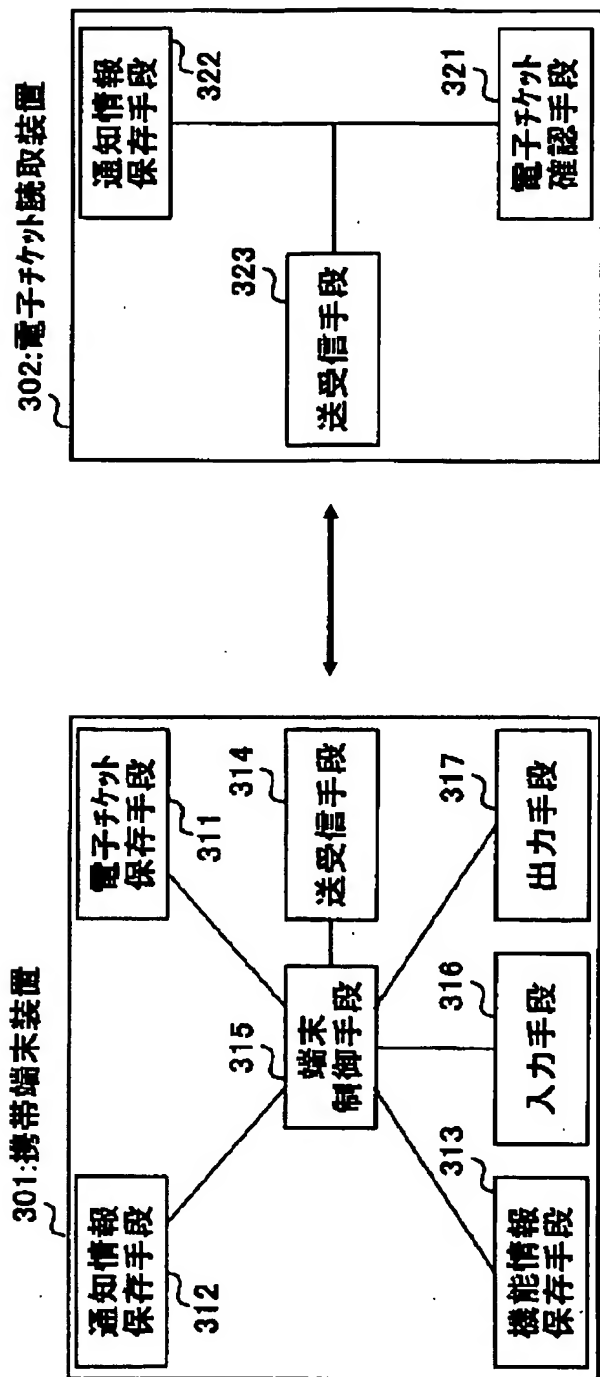
[Drawing 2]

103: BS
 111: local transceiver
 102: T/R

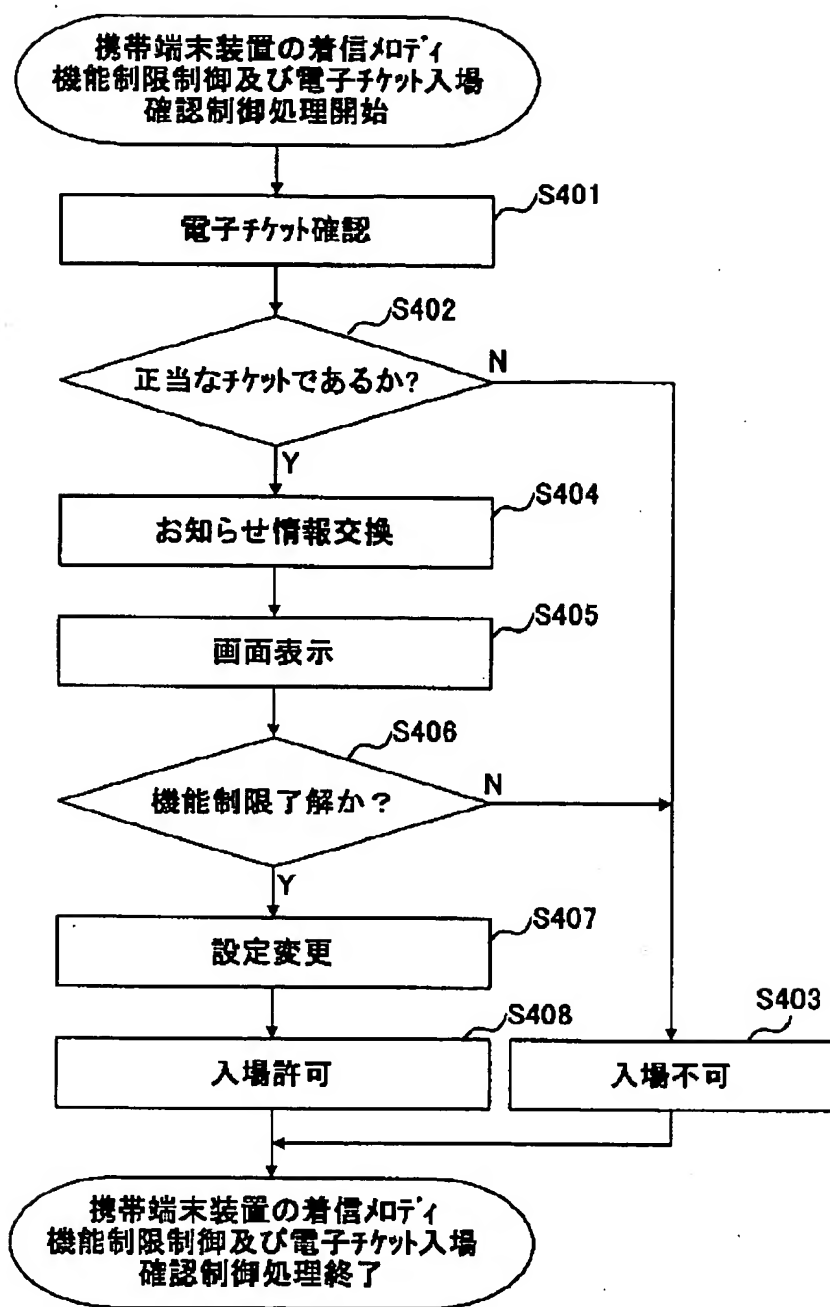
Drawing 2



[Drawing 3]



[Drawing 4]



[Translation done.]